

# A TAXONOMIC STUDY ON THE GENUS PHOROCERA FROM CHINA (DIPTERA, TACHINIDAE)

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**Abstract** The genus *Phorocera* R. -D. (Diptera, Tachinidae) of China was studied and four species, *P. assimilis* (Fallén), *P. grandis* Rondani, *P. normalis* Chao, *P. obscura* (Fallén) were recognized. One new species, *P. liaoningensis* sp. nov. from Liaoning, China is described, and male of *P. normalis* Chao is reported for the first time. The type specimens and other examined specimens are deposited in the Insect Collection, Shenyang Normal University. A key to 6 Palearctic species of *Phorocera* is provided.

**Key words** Tachinidae, *Phorocera*, new species, key, China.

## 1 Introduction

*Phorocera* Robineau Desvoidy is a genus of the tribe Exoristini of Exoristinae (Diptera, Tachinidae) and is distributed in the Palearctic and Nearctic Regions. *Phorocera* is parasitic on Lepidopterous larvae of Lymantriidae, Noctuidae and Geometridae (Chao *et al.*, 2001). Until now, 13 species of this genus are recorded in the world. Mesnil (1965) separated Exoristini into two tribes of Exoristini and Phorocerini and treated *Parasetigena* Brauer-Bergensstamm as a subgenus of genus *Phorocera*. Eight species of *Phorocera* (*Pseudotachinomyia*) from North America (Wood, 1972; O'Hara & Wood, 2004) were reported. Three Palearctic (Herting, 1984), one Spanish (Tschorsnig 1992) and four Chinese species of *Phorocera* (Chao *et al.*, 2001) were reported.

In the present study, a species of *Phorocera* from Liaoning, China is found as new to science and male of *P. normalis* Chao is recognized for the first time. The type specimens and other specimens examined are deposited in the Insect Collection, Shenyang Normal University, China (ICSNU). Terms mainly follow McAlpine (1981), but that of the male terminalia follows Sinclair (2000). Abbreviations for thoracic and leg setae and their position used in descriptions are as follows: *ac*: acrostichal; *dc*: dorsocentral; *ia*: intra-alar; *sa*: supra-alar; *a*: anterior; *ad*: anterodorsal; *av*: anteroventral; *d*: dorsal; *p*: posterior; *pd*: posterodorsal; *pv*: posteroventral; *v*: ventral.

## 2 Taxonomy

### 2.1 *Phorocera* Robineau Desvoidy, 1830

*Phorocera* Robineau Desvoidy, 1830: 131; Mesnil 1960: 634; Chao 1964: 293; Wood 1972: 473; Herting 1984: 15; Ziegler 1984: 54; Chao & Liang 1984: 55; Shima 1989: 858; Tschorsnig 1992: 7; Tschorsnig & Kolbe 1993: 288; Herting & Dely Draskovits 1993: 140; Tschorsnig & Herting 1994: 44; Tschorsnig & Herting 1994: 212; Richter 1995: 65,

1996: 901; Ziegler & Shima 1996: 391; Chao *et al.*, 1998: 1702; Liu, Chao *et al.*, 1998: 112; Tschorsnig & Schubert 1999: 273; Schumann, Bahrmann & Stark 1999: 207; Ziegler & Lange 2001: 158; Chao *et al.*, 2001: 246; Cerretti & Ziegler 2004: 285.

*Setigena* Brauer-Bergensstamm, 1889: 94.

*Leptochaeta* Brauer-Bergensstamm, 1889: 95.

*Pseudocampylus* Vimmer, 1934: 126.

Generic diagnosis. *Phorocera* is distinguished from other genera of Exoristini by occiput with black setae behind postocular seta row, eye densely covered with yellowish long hairs, ocellar seta situated behind anterior ocellus, 3+3 *dc* setae, 0+3 *ia* setae, abdominal tergites with discal setae.

### 2.2 Key to Palearctic species of *Phorocera* Robineau Desvoidy

1. Hind 2/3/4 of the abdominal tergites black, with traces of pollinosity.  
Cerci of male nearly flat in lateral view ..... *P. atricans* Tschorsnig  
Abdominal tergites covered with grey pollinosity with shifting spots. Cerci of male nearly semicylindrical, or bent or flat in lateral view ..... 2
2. Abdominal syntergite 1+2 not excavated to its posterior margin, at most excavated to 2/3. Cerci of male widened at subapical part, pointed at apex in posterior view, flat in lateral view ..... *P. obscura* (Fallén)  
Abdominal syntergite 1+2 excavated to its posterior margin ..... 3
3. Parafacial distinctly wider than flagellomere 1 in lateral view. Lunule brownish yellow. Vertex 0.9-1.0 eye width. Cerci of male narrowed at subapical part, pointed at apex in posterior view, widened at middle in lateral view ..... *P. grandis* Rondani  
Parafacial equal to or slightly wider than flagellomere 1 in lateral view. Lunule black. Vertex 0.70-0.86 eye width ..... 4
4. Scutellum entirely black; mid tibia with 2 *ad* setae on upper 1/2; flagellomere 13.5-4.0 × as long as pedicel. Cerci of male long and strongly narrowed at apical half in posterior and lateral view .....  
..... *P. normalis* Chao  
Scutellum usually brownish yellow at apex; mid tibia with 3-4 *ad* setae on upper 1/2; flagellomere 1.3 × as long as pedicel. Cerci of male widened at apical half, narrowed at apex in posterior and lateral view ..... 5
5. Posterior margin of sternite 4 with a distinctly blunt protruding, lateral lobe of sternite 5 pointed apically. Vein  $M_{1+2}$  from dm-cu cross vein to its bend slightly shorter than distance between bend and wing margin. Cerci of male widened at subapical part and only narrowed at apex in posterior view ..... *P. assimilis* (Fallén)

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Posterior margin of sternite 4 bluntly round, lateral lobe of sternite 5 bluntly round at apex. Vein  $M1+2$  from discal cross vein to its bend slightly longer than distance between bend and wing margin. Cerci of male evenly narrowed at apical half in posterior view .....  
..... *P. liaoningensis* sp. nov.

## 2.3 *Phorocera assimilis* (Fallén, 1810)

*Tachina assimilis* Fallén, 1810: 283; Mesnil, 1960: 638; Chao, 1964: 293; Wood, 1972: 503; Herting, 1984: 15; Ziegler, 1984: 55; Shima, 1989: 858; Tschorsnig, 1992: 7; Herting & Dely Draskovits, 1993: 140; Tschorsnig & Herting, 1994: 44; Tschorsnig & Herting, 1994: 212; Richter, 1995: 65, 1996: 901; Ziegler & Shima, 1996: 391; Chao *et al.*, 1998: 1702; Liu, Chao *et al.*, 1998: 112; Tschorsnig & Schubert, 1999: 273; Schumann, Bahmann & Stark, 1999: 207; Ziegler & Lange, 2001: 158; Chao *et al.*, 2001: 247; Cerretti & Ziegler, 2004: 285.

*Phorocera agilis* Robineau Desvoidy, 1830: 132.

*Metopia rapida* Macquart, 1835: 663.

*Tachina minuta* Walker, 1853: 82.

*Seigena grandis* Brauer Bergenstamm, 1889: 94.

*Phorocera gamma* Mesnil, 1946: 79.

**Diagnosis.** Posterior margin of abdominal sternite 4 with a distinctly blunt protruding.

**Specimens examined.** Liaoning, China, Mt. Tiecha-Sunligou, Tianshifu, 380-950 m, Benxi, 28-29 May 2006, 3 ♂♂, ZHANG Churr Tian, 2 ♂♂, LIU Jia-Yu, 1 ♂, FENG Li-Yong; 30 May 2008, 1 ♂, ZHANG Churr Tian, 1 ♂, 2 ♀♀, HAO Jing, 1 ♂, 3 ♀♀, ZHI Yan, 2 ♂♂, 1 ♀, JU Sheng-Nan. Laotuding-Binghugou, 500-660 m, Huanren, 30 May-1 June 2006, 3 ♂♂, ZHANG Churr Tian, 1 ♂, GE Zhen-Ping, 3 ♂♂, HAO Jing, 3 ♂♂, FENG Li-Yong, 1 ♂, YANG Zheng-Qing. Wenquansi, 350-400 m, Benxi, 1 June 2008, 2 ♂♂, ZHANG Churr Tian. Dashihu, Benxi, 450-600 m, 31 May 2008, 3 ♂♂, ZHANG Churr Tian. Sanjiazzi, 400 m, Xiuyan, 17 May 2007, 1 ♂, GE Zhen-Ping. Mt. Dahei, 650-1140 m, Jianchang, 27 May 2008, 1 ♀, LIU Jia-Yu.

**Distributions.** China (Heilongjiang, Liaoning, Shanxi), Japan, Europe (Type locality: Sweden).

## 2.4 *Phorocera grandis* Rondani, 1859

*Chetogena grandis* Rondani, 1859: 178; Mesnil, 1960: 639; Chao, 1964: 293; Wood, 1972: 503; Herting, 1984: 15; Ziegler, 1984: 55; Herting & Dely Draskovits, 1993: 140; Shima, 1989: 858; Tschorsnig & Herting, 1994: 44; Chao *et al.*, 1998: 1702; Schumann, Bahmann & Stark, 1999: 207; Chao *et al.*, 2001: 248; Chao & Zhou, 2001: 483; Cerretti & Ziegler 2004: 286.

*Leotacheta pilularia* Brauer Bergenstamm, 1889: 165.

*Phorocera carmelitana* Kugler, 1963: 26.

**Diagnosis.** Vertex 0.9-1.0 eye width, parafacial wider than flagellomere 1 in lateral view.

**Specimens examined.** Liaoning, China, Wenquansi, Benxi, 21-24 Apr. 1981, 3 ♂♂, XUE Warr Qi; Mt. Tiecha, 500-950 m, Benxi, 1 ♂, ZHANG Churr Tian, 1 ♀, LIU Jia-Yu, 1 ♂, HAO Jing, 28 May 2006; 2 ♂♂, HAO Jing, 1 ♂, JU Sheng-Nan, 30 May 2008. Sanjiazzi Mt. Yao, 400-800 m, Xiuyan, 17-18 May 2007, 1 ♂, ZHANG Churr Tian, 2 ♂♂, ZHI Yan, 10 ♂♂, YAO Zhi-Yuan, 1 ♂, CHENG Xiao-Lan, 2 ♂♂, ZHENG Shuang.

**Distributions.** China (Liaoning, Zhejiang), Japan, Israel, Russia, Austria, Czech, France, England, Italy (Type locality).

## 2.5 *Phorocera normalis* Chao, 1964 (Figs. 1-7)

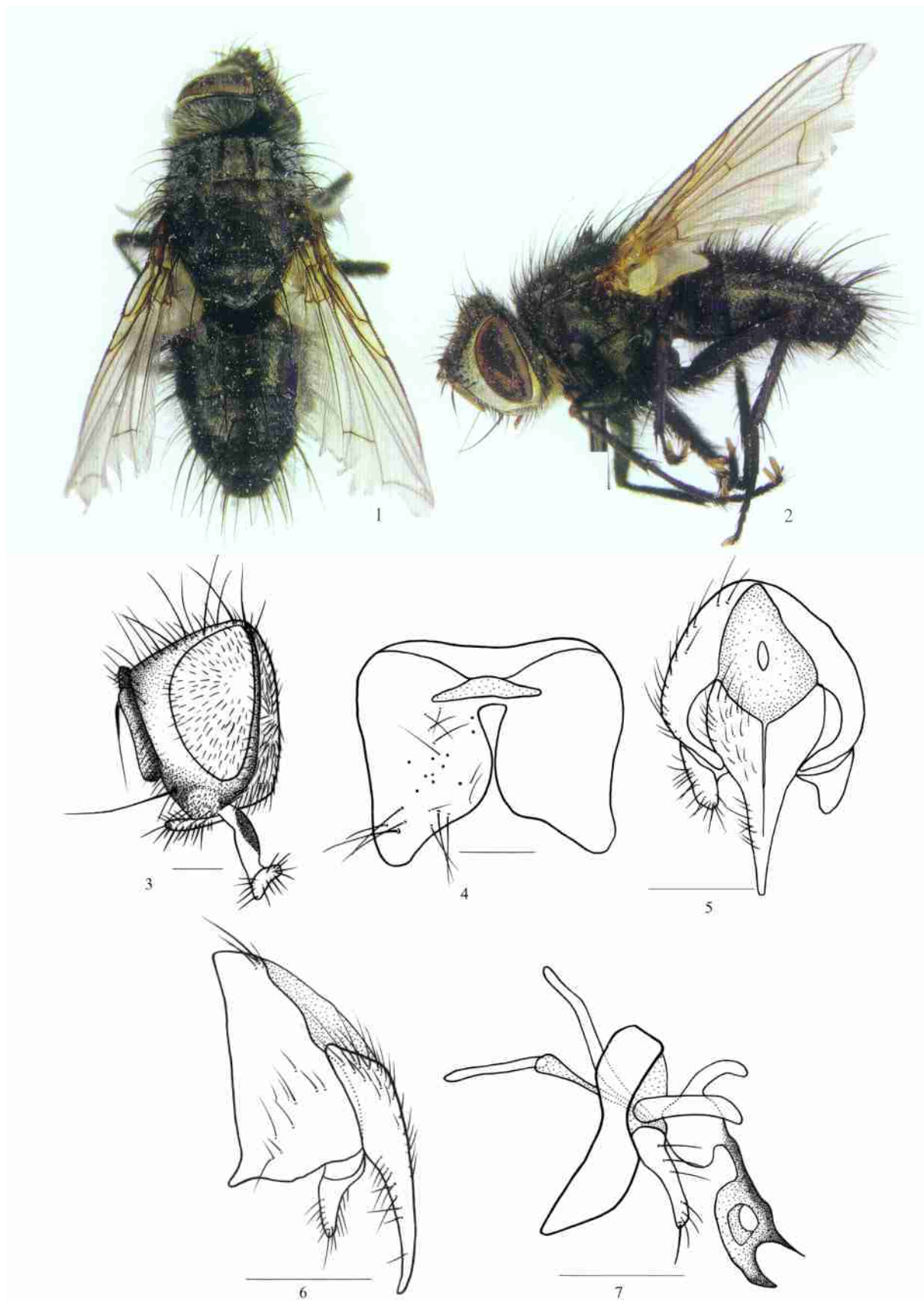
*Phorocera normalis* Chao, 1964: 295; Chao *et al.*, 2001: 249.

**Diagnosis.** Scutellum entirely black, mid tibia with 2 *ad* setae on upper 1/2.

**Description.** Body length 7.1-8.4 mm.

**Male.** Head black in ground color. Frontal vitta brownish black; fronto-orbital plate, parafacialia, gena and occiput covered with grayish pruinosity; lunule black. Antenna brownish black; palpus brownish yellow; prementum gleaming black; labella dark brown. Eye covered with densely yellowish long hairs. Vertex 0.27-0.30 head width at narrowest point; frontal vitta twice as wide as fronto-orbital plate; parafacial slightly wider than first flagellomere; lower margin of face protruding forward in lateral view. 1-12 inclinate frontal setae, upper two reclinate, the lowest one about at level with arisal base; fronto-orbital plate and upper half of parafacial with black hairs; ocellar seta situated behind anterior ocellus, about as long as the strongest frontal seta; postocellar seta slender and hair-like; inner vertical seta upward, about 0.7 eye height or as long as the strongest frontal seta; outer vertical seta hair-like; facial ridge with setae on lower 2/3; vibrissa inserted above lower margin of face by length of pedicel; occiput densely covered with yellowish hairs on upper half except for two rows of black setae behind postocular seta row. Flagellomere 1 3.5-4.0 × as long as pedicel, pedicel about as long as wide, with several setae, the setae slightly shorter than pedicel; arista bare, thickened at basal 2/5; palpus slender, with some black setae and hairs, 0.7 × as long as flagellomere 1; prementum 0.7 × as long as palpus, labella large.

**Thorax** black in ground color, covered with gray pruinosity; with 4 dark black vittae on dorsum, inner two narrow, the distance between inner and outer vittae about 3 × as wide as the inner one. Scutellum entirely black. Anterior and posterior spiracles dark brown. 3+3 *ac*; 3+3 *dc*; 0-1+3 *ia*; 3 *sa* setae, the first one short; postpronotal setae 4, the strongest three nearly in a straight line; notopleuron covered with hairs and 2 strong setae; prosternum about 1.5 × as long as wide, covered with hairs on two sides; proepisternum bare; 2 upward proepimeral setae; a row of 7-8 reclinate anepisternal setae; 1 anepimeral seta; 2+1 katepisternal setae; katepimeron bare; postsutural scutum bare. Scutellum with 4 pairs of strong marginal setae, apical scutellar seta as long as scutellum or longer, crossed and slender, subapical scutellar setae strong and paralleled, extending to basal 1/3 of abdominal tergite 4; 1 lateral scutellar setae, about 0.5-0.6 × as long as subapical scutellar setae, and a pair of slender discal scutellar setae.



Figs 1-7. *Phorocera normalis*, ♂. 1. Male in dorsal view. 2. Male in lateral view. 3. Head in lateral view. 4. Sternite 5. 5. Cerci, surstyli and epanthrium in posterior and lateral view. 6. Cerci, surstyli and epanthrium in posterior and lateral view. 7. Aedagal apodeme, hypandrium, phallus, pregonite and postgonite in lateral view. Scale bars= 0.25 mm.

Wings hyaline, brownish; tegula and basicosta brownish black; costal spine shorter than length of cross vein  $r-m$ ; 2nd costal section bare ventrally; costal setae extending to basal 1/3 of 4th costal section; relative length of 2nd, 3rd and 4th costal sections approximately 1.0: 2.2: 1.0; basal node of vein  $R_{4+5}$  with 2-3 setae dorsally and ventrally; length of vein  $M_{1+2}$  from  $dm-cu$  cross vein to its bend slightly longer than distance between bend and wing margin; vein  $M_{1+2}$  with appendix at bend (nearly right angle), cell  $r_{4+5}$  opened at apex. Halteres reddish yellow except dark brown apex. Calypter pale yellow, approximately triangle.

Legs black, fore claw and pulvillus nearly as long as fifth tarsomere; inner anterior surface of fore coxa bare; fore tibia with 2  $p$  setae, a row of short  $ad$  setae on upper 1/2, 2  $d$ , 1  $p$  and 1  $pv$  setae at apex; mid tibia with 2-3  $ad$  (lower one smaller), 2  $p$  and 1 strong  $v$  setae, 1  $a$ , 2  $d$  and 3  $v$  setae at apex; hind tibia with 3-5  $ad$  (mid one strongest), 2-4  $pd$  (lowest one strongest) and 3  $v$  setae (upmost one strongest), 2  $d$  and 1  $av$  setae at apex.

Abdomen cylindrical, black in ground color, covered with gray pruinosity, with erect black setae and hairs; tergites 3 and 4 each with a black median vitta. Abdominal syntergite 1 + 2 excavated to its posterior margin, with 2 median marginal and 1 lateral marginal setae; tergite 3 with 2 median marginal, 2 discal and 1 lateral marginal setae; tergite 4 with a row of posterior marginal and 2 discal setae; tergite 5 with a row of posterior marginal and discal setae. Sternite 1 covered with hairs. Sternite 5 and male genitalia as Figs. 2-5.

Specimens examined. Liaoning, China, Sanjiazzi Mt. Yao, 400-800 m, Xiuyan, 17-18 May 2007, 1 ♂, ZHANG Churr Tian, 1 ♂, GE Zhen Ping.

Distributions. China (Liaoning, Type locality: Heilongjiang).

## 2.6 *Phorocera obscura* (Fallén, 1810)

*Tachina obscura* Fallén, 1810: 283; Mesnil, 1960: 641; Chao, 1964: 293; Wood 1972: 503; Hering, 1984: 15; Ziegler, 1984: 54; Shima, 1989: 858; Hering & Dely Draskovits, 1993: 140; Tschorsnig & Kolbe, 1993: 288; Tschorsnig & Hering, 1994a: 44; Tschorsnig & Hering, 1994b: 213; Richter, 1996: 901; Ziegler & Shima, 1996: 391; Chao *et al.*, 1998: 1702; Schumann, Bahrman & Stark, 1999: 207; Ziegler & Lange, 2001: 158; Chao *et al.*, 2001: 250; Ceretti & Ziegler, 2004: 286.

*Phorocera vernalis* Robineau-Desvoidy, 1830: 137.

*Lydeella tessellata* Macquart, 1834: 274.

*Tachina menestho* Walker, 1849: 783.

*Tachina bellatrix* Zetterstedt, 1849: 3241.

*Phorocera tessellata* Macquart, 1850: 423.

*Phorocera caesifrons* Macquart, 1850: 424.

*Phorocera minuta* Macquart, 1850: 424.

*Phorocera varipalpis* Macquart, 1850: 425.

*Tachina ludens* Boheman, 1863: 81.

*Pseudocampopis obenbergeri* Vimmer, 1934: 128.

Diagnosis. Abdominal syntergite 1 + 2 not excavated to its posterior margin, at most excavated to 2/3.

Specimens examined. Liaoning, China, Beiling,

Shenyang, 1 ♂, 27 Apr. 1994, WEI De and LIU Hong-Sheng. 1 ♂, 24 ♀ ♀, ZHANG Churr Tian, 3 ♀ ♀, YAO Zhi Yuan, 1 ♀, GE Zhen Ping. 1 ♂, 1 ♀, HAO Jing. 1 ♀, ZHI Yan, 13 May 2007. Sunligou, Tianshifu, 380-580 m, Benxi, 29 May 2006, 1 ♂, LIU Jia-Yu, 1 ♂, YANG Zheng Qing; Mt. Tiecha, 640-1040 m, Benxi, 30 May 2008, 2 ♂ ♂, JU Sherr Nan, 1 ♂, ZHI Yan; Laotuding Binghugou, 500-660 m, Huanren, 30 May-1 June 2006, 7 ♂ ♂, ZHANG Churr Tian, 1 ♂, HAO Jing, 2 ♂ ♂, LIU Jia-Yu, 1 ♂, ZHI Yan, 1 ♂, FENG Li-Yong. Mt. Dahei, 500-1142 m, Jianchang, 2-3 June 2007, 21 ♂ ♂, ZHANG Churr Tian, 6 ♂ ♂, YAO Zhi Yuan. Sanjiazzi Mt. Yao, 400-800 m, Xiuyan, 17-19 May 2007, 3 ♂ ♂, ZHANG Churr Tian, 1 ♂, GE Zhen Ping. Mt. Dahei, 650-1140 m, Jianchang, 27-29 May 2008, 14 ♂ ♂, 4 ♀ ♀, LIU Jia-Yu and CHI Yu, 6 ♂ ♂, AO Hu and ZHENG Shuang.

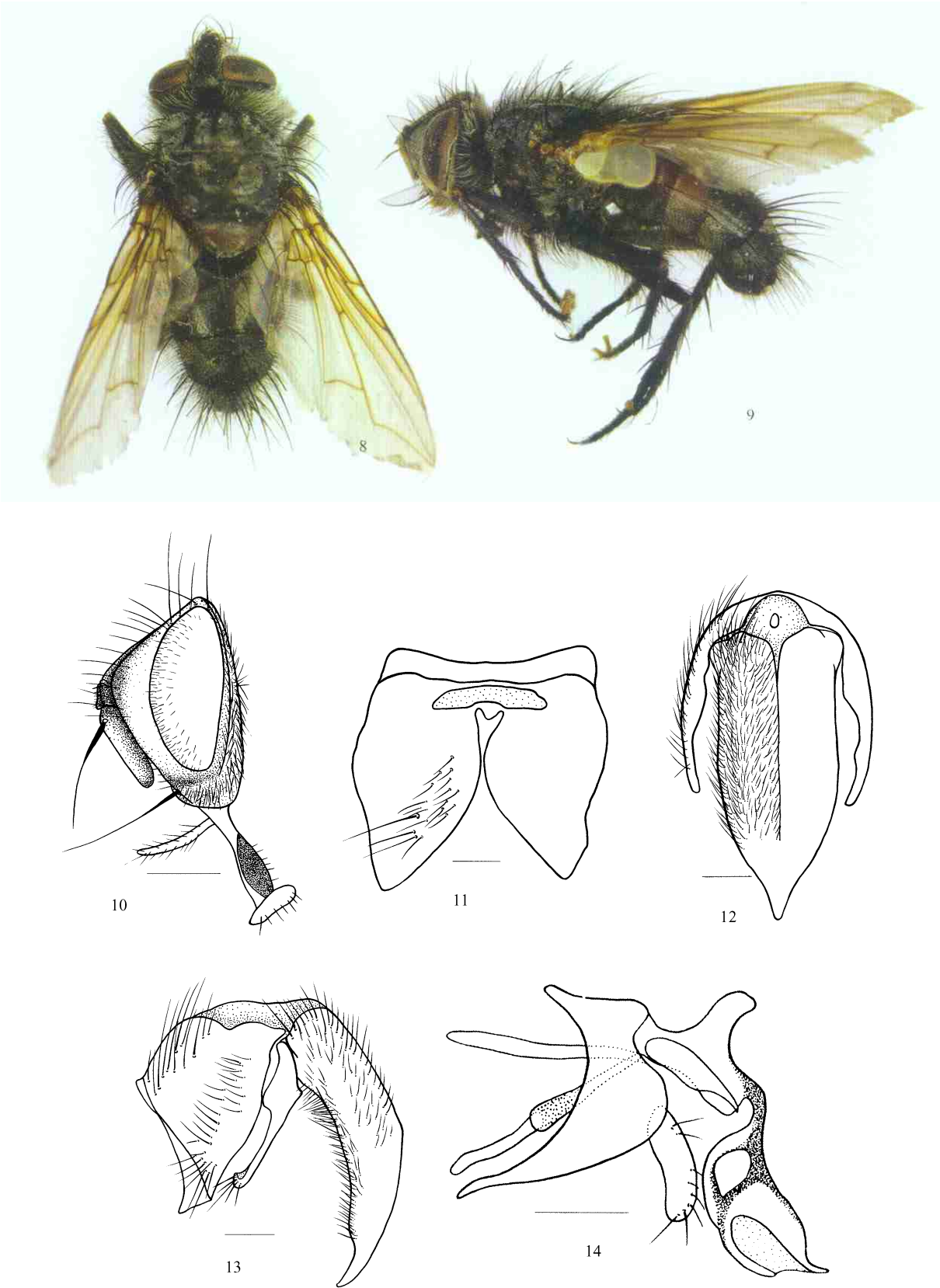
Distributions. China (Heilongjiang, Jilin, Liaoning), Japan, Russia, Europe (Type locality: Sweden).

## 2.7 *Phorocera liaoningensis* sp. nov. (Figs. 8-14)

Diagnosis. Posterior margin of sternite 4 bluntly round, cerci of male evenly narrowed at apical half in posterior view.

Description. Body length 9.2-11.2 mm.

Male. Head black in ground color. Frontal vitta brownish black; fronto-orbital plate, parafacialia, gena and occiput covered with grayish pruinosity; lunule black. Antenna brownish black; palpus brown to dark brown on lower 1/2, reddish yellow on upper 1/2; prementum gleaming black; labella dark brown. Eye densely covered with pale yellow long hairs. Vertex 0.25-0.28 head width at narrowest point; frontal vitta twice as wide as fronto-orbital plate; parafacial slightly wider than flagellomere 1; lower margin of face not distinctly protruding forward in lateral view. 11 inclinate frontal setae, upper two reclinate, the lowest one about at level with base of pedicel; fronto-orbital plate densely with black hairs, which extend to the lowest frontal seta; ocellar seta situated behind anterior ocellus, about as long as the strongest frontal seta; a pair of postocellar setae 0.5-0.6 × as long as inner vertical seta; upward inner vertical seta about as long as the strongest frontal seta or 0.6-0.7 eye height; outer vertical seta hair-like, indistinct; facial ridge with setae on lower 2/3; vibrissa inserted above lower margin of face by length of pedicel; occiput densely covered with yellowish hairs on upper half except for a row of black setae behind postocular seta row. Flagellomere 1 3.5-4.0 × as long as pedicel, pedicel about as long as wide, with several setae, the longest one about as long as pedicel; arista bare, thickened at basal 1/3; palpus slender, with some black setae and hairs, as long as flagellomere 1; prementum



Figs 8-14. *Phorocera liaoningensis* sp. nov. ♂. 8. Male in dorsal view. 9. Male in lateral view. Figs 10. Head in lateral view. 11. Sternite 5. 12-13. Cerci, surstyli and epandrium in posterior and lateral view. 14. Aedagal apodeme, hypandrium, phallus, pregonite and postgonite in lateral view. Scale bars: 10= 1 mm, 11-14= 0.25 mm.

2.0-2.5 × as long as wide, labella large.      pruinosity; with 4 dark black vittae on dorsum, inner two narrow; the distance between inner and outer vittae

Thorax black in ground color, covered with gray



about  $2.5-3.0 \times$  as wide as the inner one. Scutellum brownish yellow except black base. Anterior and posterior spiracles dark brown.  $3+3\ ac$ ;  $3+3\ dc$ ;  $0+3\ ia$ ;  $3\ sa$  setae, the first one distinctly short; 4 postpronotal setae, the strongest three nearly in a straight line; notopleuron covered with hairs and 2 strong setae; prosternum about  $1.5 \times$  as long as wide, covered with hairs on two sides; proepisternum bare; 2 upward proepimeral setae; a row of 7-8 reclinate anepisternal setae; 1-2 anepimeral seta;  $2+1$  katapisternal setae; katapimeron bare; postsutural scutum bare. Scutellum with 4 pairs of strong marginal setae, apical scutellar setae crossed and slender, about as long as scutellum and nearly paralleled with scutellum; subapical scutellar setae strong and paralleled, more than twice as long as apical scutellar setae; 1 lateral scutellar seta, about  $0.7 \times$  as long as subapical scutellar setae, discal scutellar setae absent.

Wings hyaline, pale brownish; tegula and basicosta black. Costal spine shorter than length of cross vein  $r-m$ ; 2nd costal section bare ventrally; costal setae extending to basal  $1/3$  of 4th costal section; relative length of 2nd, 3rd and 4th costal sections approximately 1:1.6:1.0; basal node of vein  $R_{4+5}$  with 3-5 setae dorsally and ventrally; length of vein  $M_{1+2}$  from  $dnr-cu$  cross vein to its bend slightly longer than distance between bend and wing margin; vein  $M_{1+2}$  with appendix at bend, cell  $r_{4+5}$  opened at apex. Halteres brown on upper  $1/2$ , reddish yellow on lower  $1/2$ . Calypter pale yellow, approximately triangle.

Legs black, fore claw and pulvillus slightly longer than fifth tarsomere; fore tibia with 2  $p$  setae, a row of short ad setae on upper  $1/2$ , 2  $d$  and 1  $pv$  setae at apex; mid tibia with 3  $ad$  (lower one strongest), 2-3  $p$  and 1 strong  $v$  setae, at apex 1  $a$ , 3  $d$  and 2  $v$  setae; hind tibia with a row of  $ad$  (mid one strongest) at basal  $2/3$ , 3-4  $pd$  (lower one strongest) and 3  $v$  setae (lower one strongest), 2  $d$  and 1  $av$  setae at apex.

Abdomen cylindrical, black in ground color, covered with gray pruinosity, with erect black setae and hairs; abdominal tergites with a median black vitta, which distinctly on tergite 3. Abdominal syntergite 1+2 excavated to its posterior margin, with 2 median marginal and 1 lateral marginal setae; tergite 3 with 2 median marginal, 2 discal and 1 lateral marginal setae; tergite 4 with a row of posterior marginal and 2 discal setae; tergite 5 separately with a row of posterior marginal and discal setae. Sternite 1 covered with hairs, sternites 4 and 5 exposed, posterior margin of sternite 4 bluntly round. Sternite 5 and male genitalia as Figs. 11-14.

Holotype  $\delta$ , Mt. Tiecha, Benxi, 500-950 m, Liaoning, China, 28 May 2006, ZHANG Chun-Tian. Paratypes: 1  $\delta$ , ZHANG Chun-Tian, 2  $\delta\delta$ , HAO Jing, 2  $\delta\delta$ , ZHI Yan, same place and date as

holotype; 5  $\delta\delta$ , HAO Jing, 1  $\delta$ , JU Sheng-Nan, same place as holotype, 30 May 2008.

**Etymology.** Specific epithet is from the type locality.

**Remarks.** This new species is closely related to *P. assimilis* (Fallén), but can be distinguished from the latter in having bluntly round posterior margin of sternite 4, vein  $M_{1+2}$  from  $dnr-cu$  cross vein to its bend slightly longer than distance between bend and wing margin, cerci of male evenly narrowed at apical half in posterior view.

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## 中国虻寄蝇属分类学研究 (双翅目, 寄蝇科)

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**摘要** 虻寄蝇属 *Phorocera* 隶属于双翅目 Diptera 寄蝇科 Tachinidae 追寄蝇亚科 Exoristinae 追寄蝇族 Exoristini, 一般寄生于鳞翅目毒蛾科, 夜蛾科和尺蛾科的幼虫; 主要分布于古北区和新北区。该属区别于追寄蝇族 Exoristini 其它属的特征为: 眼后鬃列后方具黑毛, 复眼具淡黄色长毛, 单眼鬃位于前单眼后方, 背中鬃 3+3, 翅内鬃 0+3, 腹部背板具心鬃。本文系统研究了中国虻寄蝇属的 4 个已知种, 勺肛虻寄蝇 *P. assimilis*, 锥肛虻寄蝇 *P. grandis*, 直条虻寄蝇 *P. normalis* 和昏暗虻寄蝇 *P. obscura*; 并首次描述了直条虻寄蝇的雄性和采自我国辽宁本溪的 1 新种, 辽宁虻寄蝇 *Phorocera liaoningensis* sp.

**关键词** 寄蝇科, 虻寄蝇属, 新种, 检索表, 中国。

中图分类号 Q969.453.5

nov.; 编制了古北区本属 6 种雄性检索表。新种区别于近缘种勺肛虻寄蝇的特征为: 第 4 腹板后缘钝圆, 中脉心角至中肘横脉的距离略长于心角至翅后缘的距离, 雄性肛尾叶后面观端半部均匀变窄。

正模 ♂, 辽宁本溪铁刹山 500-950 m, 2006-05-28, 张春田采; 副模 1 ♂, 张春田采, 2 ♂♂, 郝晶采, 2 ♂♂, 智妍采, 采集地和日期均同正模; 5 ♂♂, 郝晶采, 1 ♂, 菊胜男采, 采集地同正模, 2008-05-30。新种模式标本及其它研究标本保存于沈阳师范大学昆虫标本馆 (ICSNU)。

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